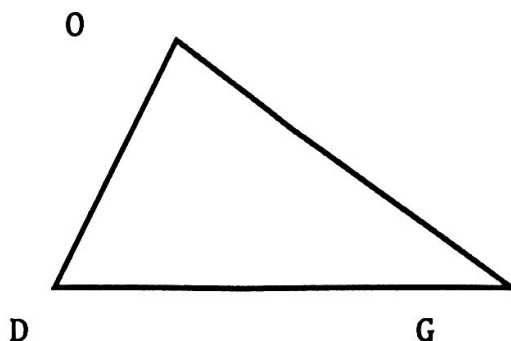
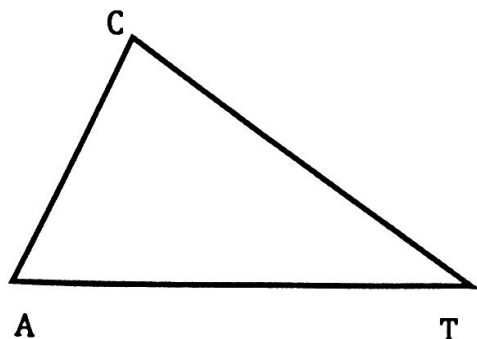


Exploration #1:



Find the measure of the following:

1) $m\angle A = 62^\circ$

2) $AC = 1.5 \text{ in}$

3) $AT = 2.5 \text{ in}$

1) $m\angle D = 62^\circ$

2) $DO = 1.5 \text{ in}$

3) $DG = 2.5 \text{ in}$

→ Do you think the triangles above are congruent? (Circle one!)

Yes

No

→ Do you know that the triangles above are congruent, even though we only measured an included angle and 2 sides? Why or why not?

→ Do all the other sides and angles have to be congruent because the angle and sides above are congruent? Why or why not?

Measure the remaining corresponding sides of the triangle:

1) $CT = 2.25 \text{ in}$

2) $m\angle C = 80^\circ$

3) $m\angle T = 35^\circ$

1) $OG = 2.25 \text{ in}$

2) $m\angle O = 80^\circ$

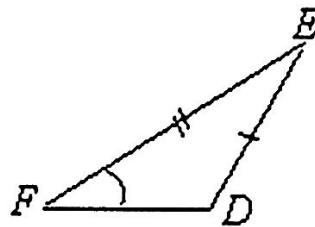
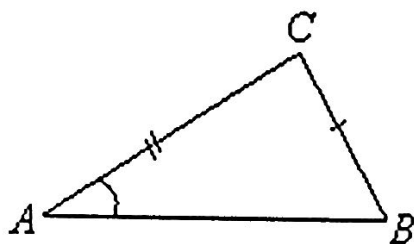
3) $m\angle G = 35^\circ$

→ NOW, do you know that the triangles above are congruent? Yes or No

→ Is measuring a side-angle and side is enough to decide that all the corresponding angles and sides are congruent? Why or why not?

BE YOUR BEST SELF

Exploration #2



E

Confirm that the following measurement are congruent:

1) $m\angle A = 32^\circ$

1) $m\angle F = 32^\circ$

2) $AC = 1.625 \text{ in}$

2) $ED = 1.625 \text{ in}$

3) $CB = 1 \text{ in}$

3) $EF = 1 \text{ in}$

→ Do you think the triangles above are congruent? (Circle one!)

Yes

No

→ Explain why you believe these triangles are congruent or not.

Measure the remaining corresponding side and angles of the triangle:

4) $m\angle B = 61^\circ$

1) $m\angle E = 30^\circ$

2) $m\angle C = 87^\circ$

2) $m\angle D = 61^\circ$

3) $AB = 1.75^\circ$

3) $DF = 0.875 \text{ in}$

→ NOW, do you know that the triangles above are congruent (using the information above)?

→ Is measuring just an angle and 2 sides enough to show the triangles are congruent?

→ How is this different from the previous exploration?